

REMARKS

Claims 1-12, 19, 23, 27, 31 and 35-42 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The claims have been amended to correct the indefinite language and are believed to comply with the 35 U.S.C. §112, second paragraph. The Examiner is respectfully requested to remove this rejection.

In claim 1, the "total amount of polyol" was clarified to recite that the term refers to the combined amount of polyester polyol and co-polyol. The basis of this change can be found in Paragraph 0016, lines 4-7. It is also clarified that the co-chain extender "of a different chain length" is compared to the chain length of the symmetrical chain extender. The co-chain extender could be a symmetrical chain extender as long as it is of a different chain length than the symmetrical chain extender. The technical concept involved is to break up the crystallinity of the polymer by having different chain extenders.

Also in claim 1, the language of the ratio of the molar ratio of the co-chain extender to the symmetrical chain extender to the weight percent of the polyether co-polyol to the combined total weight of the polyester polyol and the polyether co-polyol, is clarified. One would first calculate the molar ratio of the co-chain extender to the symmetrical chain extender. Referring to Example 2 (Table 1 on page 12), it can be seen that 25 grams of 1,4-BDO (symmetrical chain extender) was used and 2.5 grams of 1,3-BDO for the co-chain extender. Since 1,4-BDO and 1,3-BDO both have the same molecular weight, the mole percent is the same as weight percent or $10\% \left(\frac{2.5}{25} \right)$. Next one needs to determine the weight percent of the polyether co-polyol used in relation to the combined polyol weight (the polyester polyol plus the polyether co-polyol). Referring to Example 2 (Table 1), again it can be seen that 17.25 grams of PTMEG (polyether co-polyol) was used and 155.25 grams of PBAAd (polyester polyol) was used for a combined weight of $17.25 + 155.25 = 172.50$ grams of total polyol. The weight percent of polyether co-polyol used was $\frac{17.25}{172.50} = 10\%$. The ratio would be $1.0 \left(\frac{10 \text{ mole \% co-chain extender}}{10 \text{ wt. \% co-polyol}} \right)$.

Claim 5 has been cancelled.

In claim 37, the words "substantially simultaneous" were deleted. As the Examiner can appreciate the reaction can never be simultaneous, but it is very close to simultaneous. For clarity sake, the words were deleted and the claim now recites that the reactants are fed to an extruder and reacted.

Claims 1-12, 19, 23, 27, 31 and 35-42 were also rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description. The amended claims as discussed above are believed to correct this problem and now comply with 35 U.S.C. §112, first paragraph. The Examiner is respectfully requested to remove this rejection.

Claims 1, 12, 19, 23, 27, 31 and 35-42 were also rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The amendments made and the explanation shown above as to how to calculate the ratio of the molar percent of the co-chain extender to the wt.% of the co-polyol should allow the claims to comply with the enablement requirement of 35 U.S.C. §112, first paragraph. The Examiner is respectfully requested to remove this rejection.

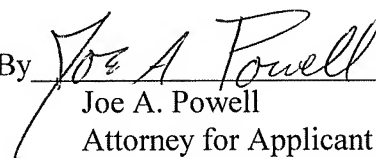
Claims 13-18, 20-22, 24-26, 28-30 and 30-34 were rejected under 35 U.S.C. §112, first paragraph, because the Examiner believes the specification does not provide enablement, except for the thermoplastic polyurethanes shown in the Example. Applicants respectfully dispute this rejection as to the amended claims. The invention does not apply to all thermoplastic polyurethanes. The polyol must be a polyester polyol and the co-polyol must be a polyether polyol. Also, the claims recite specific amounts of the two polyols. The claims also recite that 2 different chain extenders are used, one symmetrical and a co-chain extender that is different than the symmetrical chain extender. Also, the amount of co-chain extender used in relation to the polyether co-polyol is recited in the claims. The Examples show one polyol and two possible co-chain extenders (1,3-BDO and DPG).

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Applicants has shown in the Examples what he believes to be the best mode. The Specification describes many other polyols, co-polyols, chain extenders and co-chain extenders that could be used in this invention. For one skilled in the art, it would not require a lot of experimentation to substitute a different reactant to those shown in the Examples. Applicants respectfully request the Examiner to reconsider and remove this rejection.

The amended claims are now believed to comply with 35 U.S.C. §112.

Respectfully submitted,

By 
Joe A. Powell
Attorney for Applicant
Reg. No. 28,108

Noveon, Inc.
9911 Brecksville Road
Cleveland, Ohio 44141-3247
Ph: (216) 447-5716
Fax: (216) 447-5933
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